

## Durham Research Online

---

### Deposited in DRO:

24 February 2015

### Version of attached file:

Accepted Version

### Peer-review status of attached file:

Peer-reviewed

### Citation for published item:

Moore, T. and Braun, A. and Creighton, J. and Cripps, L. and Haupt, P. and Klenner, I. and Nouvel, P. and Ponroy, C. and Schönfelder, M. (2013) 'Oppida, agglomerations and suburbia : the Bibracte environs and new perspectives on Late Iron Age urbanism in central-eastern France.', *European journal of archaeology*, 16 (3). pp. 491-517.

### Further information on publisher's website:

<http://dx.doi.org/10.1179/1461957113Y.0000000034>

### Publisher's copyright statement:

### Additional information:

---

### Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a [link](#) is made to the metadata record in DRO
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full DRO policy](#) for further details.

## Authors' Original Manuscript - Postprint

This is an Author's Accepted Manuscript of an article published as:

Tom Moore, Arno Braun, John Creighton, Laura Cripps, Peter Haupt, Ines Klenner, Pierre Nouvel, Côme Ponroy and Martin Schönfelder (2013) *Oppida, Agglomerations, and Suburbia: the Bibracte Environs and New Perspectives on Late Iron Age Urbanism in Central-Eastern France*. *European Journal of Archaeology*, 16 (3) 2013, 491–517

Published edition, available through Mayney online at:

<http://www.maneyonline.com/doi/pdfplus/10.1179/1461957113Y.0000000034>

## ***Oppida, agglomerations and suburbia: The Bibracte environs and new perspectives on Late Iron Age urbanism in central-eastern France***

**Tom Moore<sup>1</sup>, Arno Braun<sup>2</sup>, John Creighton<sup>3</sup>, Laura Cripps<sup>4</sup>, Peter Haupt<sup>2</sup>, Ines Klenner<sup>5</sup>, Pierre Nouvel<sup>6</sup>, Côme Ponroy<sup>1</sup> and Martin Schönfelder<sup>7</sup>**

<sup>1</sup>Department of Archaeology, Durham University, UK

<sup>2</sup>Institut für Vor- und Frühgeschichte, Johannes-Gutenberg Universität Mainz, Germany

<sup>3</sup>Department of Archaeology, University of Reading, UK

<sup>4</sup>Department of Anthropology, Howard Community College, USA

<sup>5</sup>Archäologisches Institut, Universität Hamburg, Germany

<sup>6</sup>Département d'histoire de l'art et d'Archéologie Université de Franche-Comté, France

<sup>7</sup>Forschungsinstitut für Archäologie, Römisch-Germanisches Zentralmuseum, Germany

### **Abstract**

*This paper explores the nature and chronology of La Tène and early Roman unenclosed agglomerations in central-eastern France. It has been prompted by the discovery of a c. 115 ha La Tène D2b/Augustan (c. 50 BC to AD 15) site close to Bibracte in the Morvan, focused around the source of the river Yonne. This complex provides a new perspective on the chronology and role of Late La Tène and early Roman unenclosed settlements, adding further complexity to the story of the development of Late La Tène oppida. It indicates that these 'agglomerations' followed remarkably varied chronological trajectories, raising important issues concerning the nature of landscape and social change at the end of the Iron Age.*

**Keywords:** La Tène, oppidum, France, agglomeration, landscape archaeology.

### **Introduction**

One of the most significant transformations in later prehistoric Europe is the appearance of the large enclosed settlements known as oppida. These sites are often regarded as the beginnings of urbanism in Europe which marked the rise of proto-state communities and were the focus of engagement with the expanding Roman Empire (Collis, 1984; Fichtl, 2005). However, it is recognised that the concept of Late La Tène (c. 250 to 30 BC) *oppida* as a unified group obscures a more complex picture of urban

and social developments with a number of unenclosed ‘agglomerated’ settlements representing an earlier phase to this phenomenon (Woolf, 1993; Kaenel, 2006).

This paper explores the nature and chronology of these unenclosed agglomerations. It has been prompted by our own fieldwork on a La Tène D2/Augustan (c. 50 BC to AD 15) complex in the Morvan, covering c. 115 ha, focused around the source of the River Yonne. This relatively neglected site is situated only a short distance away from Bibracte (Figure 1) which is, alongside Manching (see Wendling, this volume), one of the most intensively studied oppida in Europe. It will be suggested that this discovery provides a new, contrasting element to current perspectives on the chronology and role of Late La Tène and early Roman unenclosed agglomerations, adding further complexity to the story of the development of Late La Tène oppida and their significance as proto-urban sites. It indicates that some ‘agglomerations’ followed quite different chronological trajectories. This research raises important issues concerning the nature of landscape and social change at the end of the Iron Age, with this new site potentially displaying a link between the flourishing of this unenclosed complex, and the oppidum itself, as part of broader changes in settlement patterns in first century BC Gaul (cf. Barral & Nouvel, 2012; Haselgrove & Guichard, forthcoming).

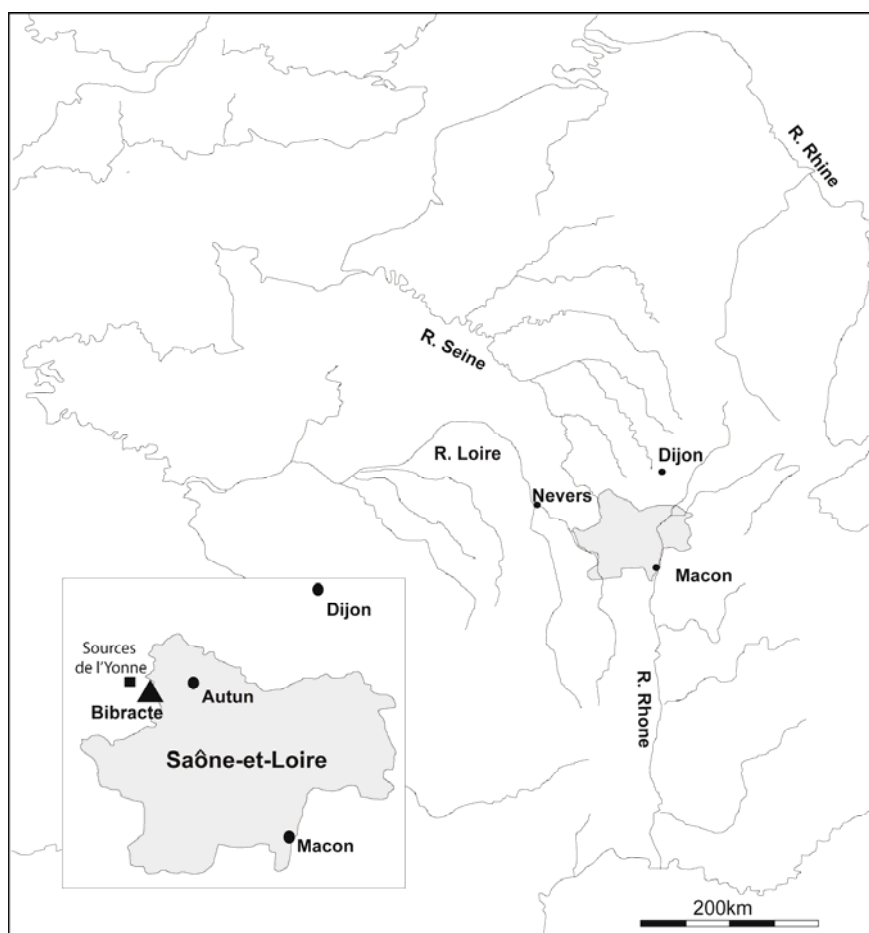


Figure 1: Location of Mont Beuvray and Sources de l'Yonne, Burgundy, France (Moore)

### Oppida and agglomerations in Gaul

Since excavations at Basel, Switzerland in the 1930s, archaeologists have recognised that in addition to the fortified sites (oppida) which developed in the Late La Tène period across western and central Europe, an additional group of unenclosed sites also existed (Collis, 1984: 77; Kaenel, 2006: 31; Salač

2012). These 'agglomerations', situated on route-ways and specialising in craft production, often emerged between the third and second century BC, *prior* to the appearance of enclosed sites (Collis, et al. 2000; Barral, 2011: 209). These are usually regarded as village type settlements, the first appearance of specialised communities prior to the development of proto-urban centres in the second and first centuries BC.

Research in central and eastern France has previously indicated that many of the agglomerations and oppida followed a common sequence: after the demise of Late Hallstatt hilltop sites, lowland open settlements developed in La Tène C (c. second century BC), this preceded the later La Tène D (late second or first century BC) move to hilltop locations with the development of enclosed 'oppida', which was usually followed by a subsequent move to lowland locations associated with the construction of a Roman town (Audouze and Buchsenschutz 1992, 238; Collis, et al. 2000: 81; Fichtl, 2005; Kaenel, 2006: 31). At Levroux, Indre, for example an open settlement at Les Arènes emerged on the plain in La Tène C2 with an apparent later shift to an enclosed oppidum on the nearby hilltop, with the succeeding Roman town encompassing both areas (Figure 2; Collis, et al. 2000: 76; Kaenel, 2006: 32; Buchsenschutz, et al. 2008). However, in recent years this simple sequential model of development is becoming increasingly more complex (Barral, 2011). In addition to the recognition of unenclosed settlements dating much earlier, in Hallstatt D, in a number of cases it is also clear that some Late La Tène open agglomerations are likely to have overlapped with fortified sites, for example at Basel (Kaenel, 2006: 32) and possibly at Levroux (Collis, et al. 2000: 79). In central eastern France major surveys have indicated some sites followed the sequence attested to above (shift to an upland site from a lowland agglomeration: Nouvel, 2011), but there is also evidence that others had contemporary hilltop and lowland sites (Nouvel, 2011; Barral & Nouvel, 2012). In central France, detailed work in the Auvergne around Clermont-Ferrand suggests a slightly different picture, with a variety of hilltop sites occupied, at least partly, simultaneously; although here too it appears that the major unenclosed agglomeration at Aulnat-Gandaillat on the plain was abandoned in favour of the enclosed sites (Collis, et al. 2000; Poux, 2012). The number of such Late La Tène agglomerated settlements is also steadily increasing, partly due to developer-led archaeology, and it is becoming clear that understanding the nature, date and role of these sites, and the environs of oppida more generally, has fundamental implications for models of urbanisation and social change at the end of the Iron Age (Kaenel, 2006; Barral, 2011; Barral & Nouvel, 2012).

In some regions, it has been suggested that occupation of enclosed 'oppida' was coeval with a depopulation and abandonment of rural settlements, potentially a nucleation of the wider community (Collis, 1984: 83). Such a sequence has been recognised in a number of areas of France, including the Auvergne (Collis, et al. 2000), Picardy (Haselgrove, 1996) and potentially areas of eastern France (Nouvel, 2011). It is essential, therefore, to understand better the regional context of such oppida in order to determine the role of enclosed and unenclosed agglomerations in these developments.

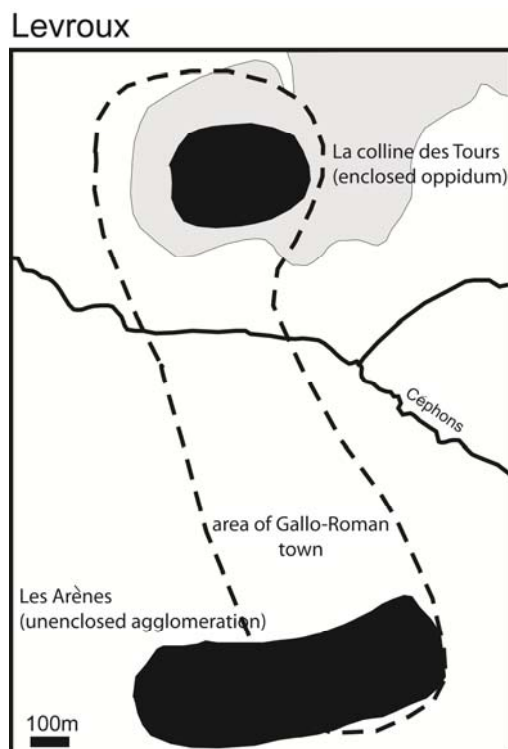


Figure 2: Sequence of unenclosed agglomeration to enclosed *oppidum* suggested for Levroux (after Collis et al. 2000, figure 3)

### Case study: the Bibracte environs

The oppidum of Bibracte consists of a stone-faced *murus gallicus* rampart, enclosing approximately 135 ha of activity on Mont Beuvray, Burgundy and has become a key site in discussions of the development and role of oppida. Referred to in Caesar's *Gallic Wars*, it appears to have acted as the capital of the *Aedui*, one of the most significant socio-political entities in first century BC Gaul. Since the pioneering excavations of Jacques-Gabriel Bulliot in the 19<sup>th</sup> century and the more recent development of the *Centre archéologique européen* (CAE) devoted to its study, there is an increasingly clear appreciation of the nature of occupation at Bibracte, from its emergence in the second century BC to its heyday in the late first century BC (Dhennequin, et al. 2008). Despite its fundamental role in discussion of oppida, the place of Bibracte in relation to the wider settlement patterns is less well understood and has been notably absent from previous discussions of the process of settlement change (e.g. Collis, et al. 2000; Kaenel, 2006). The aim of our fieldwork at the Sources de l'Yonne has been to help place Bibracte within its landscape setting and situate the site within the development of oppida as it is becoming understood in the better studied landscapes of eastern and central France.

### Research in the environs of Bibracte and at Sources de l'Yonne

Until relatively recently little research has been undertaken in the environs of Bibracte. One of the key reasons for this was that the landscape is notoriously difficult for conducting landscape survey; dominated by woodland and pasture, fieldwalking opportunities are limited. Added to this, the local geology is unresponsive to geophysical survey (Creighton, et al. 2008). Despite these problems, building on earlier limited survey work (Crumley, 1987; Buchsenschutz and Richard, 1996), field survey in the Arroux valley between 2000–2003 demonstrated that surface survey and geophysics

can identify Late La Tène and Gallo-Roman sites, providing an appreciation of their form and function (Creighton, et al. 2008).

The valley survey was relatively successful in elucidating an improved picture of settlement patterns between Bibracte and Autun (*Augustodunum*). It identified Gallo-Roman and potentially Iron Age rural settlements; however, the failure to recover more Late La Tène material could support the idea of a reduction in rural sites at the time when Mont Beuvray was intensively occupied. In the early Empire, site numbers rise noticeably, only to fall to back again in late Antiquity. However, this survey was down in the valley basin; apart from some small-scale investigations at nearby sites, such as Poil (Creighton, et al. 2008; Haupt & Klenner, 2009), little was known of the immediate environs of the oppidum. In order to rectify this, a team from the Johannes Gutenberg University and Römisch-Germanisches Zentralmuseum, Mainz (RGZM) undertook a systematic survey of immediate environs of the oppidum, working out from an area of known activity at Sources de l'Yonne where Romano-Celtic shrines had previously been recognised. The inhospitable nature of the landscape to traditional survey methods meant new techniques were required for such a survey. This involved identifying the presence and absence of artefacts from molehills and tree-throws (usually ceramics, particularly amphorae) recording these by GPS/Total station on to a GIS allowing detection of activity areas even within the densely wooded and pasture landscape around Bibracte (Figure 3).

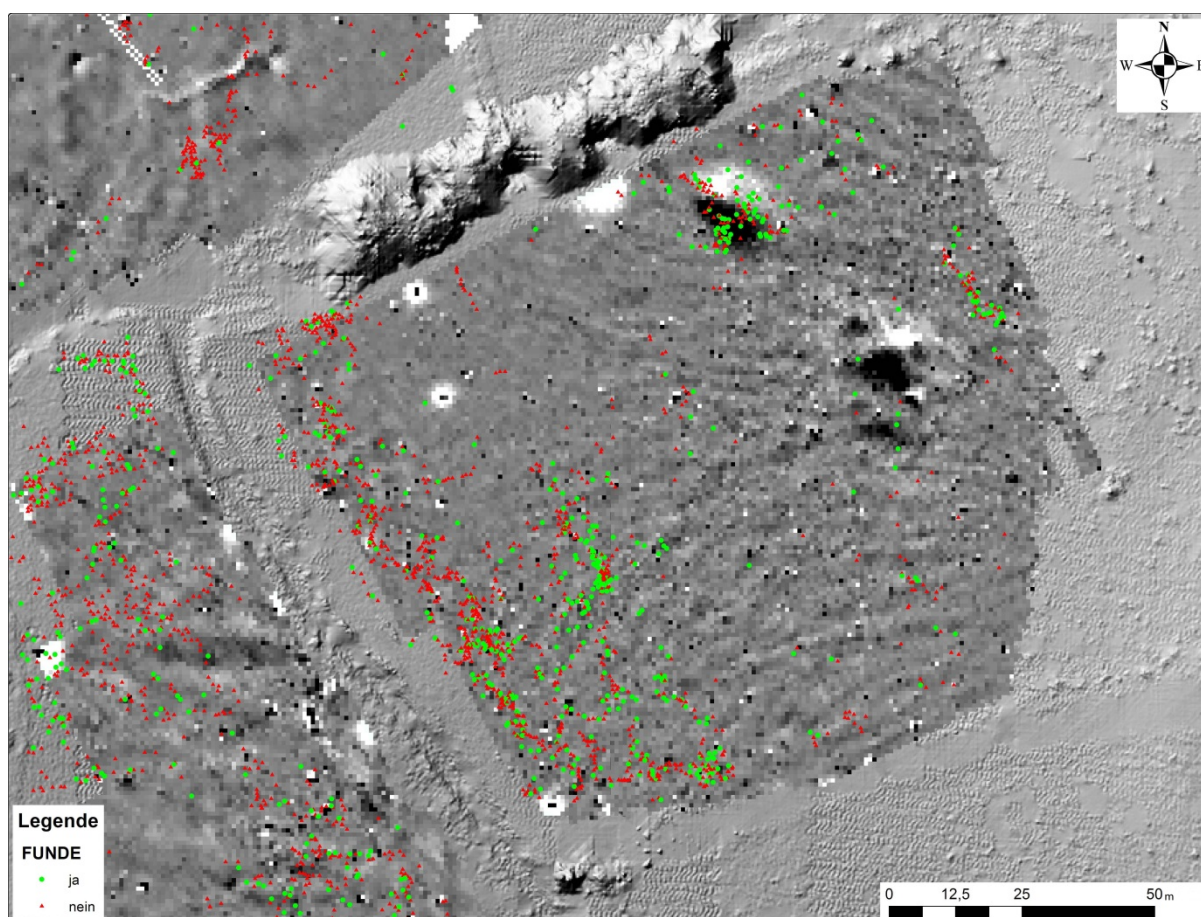


Figure 3: An example of the survey technique of identifying ceramics from molehills and tree-holes at Sources de l'Yonne. Molehills with Late La Tène or early Roman finds in green, without in red. Findspots have been superimposed over the fluxgate gradiometry data and a LiDAR survey of the area (image: Klenner and Haupt)



From this mapping it became increasingly clear that Late La Tène material, particularly Dressel 1 amphorae, was spread across an extremely large area of the hills surrounding the source of the River Yonne (Haupt, et al. 2007), a tributary of the Seine, three kilometres to the northwest of Mont Beuvray. Activity of Late La Tène/Gallo-Roman date was known from the Sources de l'Yonne (henceforth SDY) from small scale excavations in the 1980s which revealed a Gallo-Roman temple and activity immediately close by (Figure 4; Péquiot, et al. 1996). However, the small-scale nature of the excavations meant little could be said of the nature and date of activity in the wider area. The survey work, by contrast, revealed the existence of major spread of activity of La Tène date covering an area well beyond the temples' immediate vicinity.

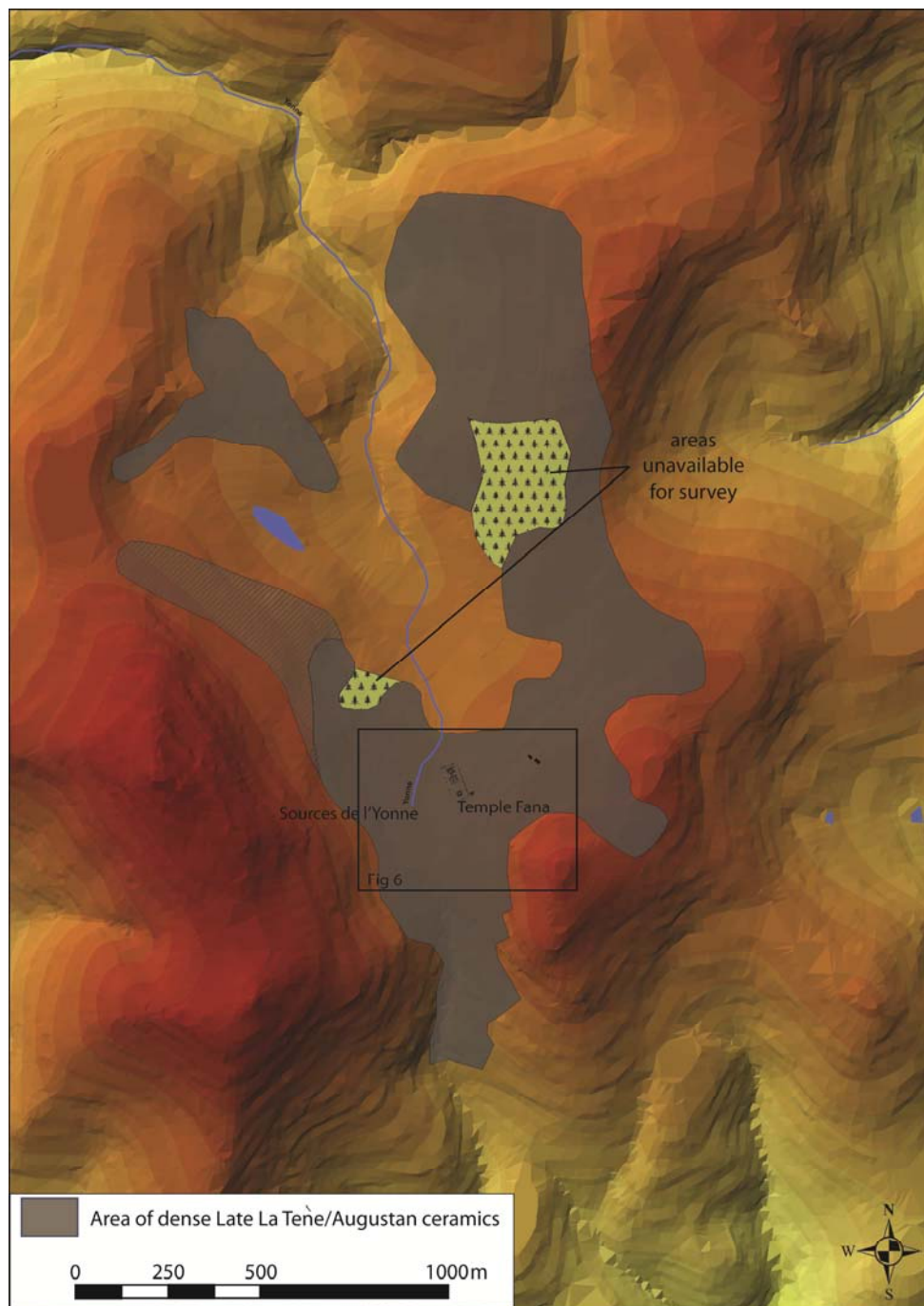


Figure 4: The extent of the Sources de l'Yonne complex defined by survey finds (Image: Klenner)

Alongside the surface survey, LiDAR of the area allowed the mapping of large scale terracing, similar to that recognised on Bibracte, which extends along the slopes around the source (Figure 5; Schubert, 2008). This work has been augmented by geophysical surveys of the small open areas around the source which, despite the geological problems, have identified occupation areas, including an enclosure, which correspond with clusters of ceramics identified from molehill survey. This was followed by excavations in proximity to the spring, which investigated a number of features identified through geophysical survey (Fig. 6, S1-S4; Braun et al. Forthcoming a). Further excavations subsequently examined the terraces on the slopes of La Grande Vente (Figure 6, S5; Braun, et al. 2010; Moore, 2011; Braun, et al. Forthcoming a). The work at SDY has been augmented by continued surface survey in the Arroux Valley and Bibracte environs, providing an increasingly detailed awareness of the settlement patterns in the area (Figure 7; Barral and Nouvel, 2012).

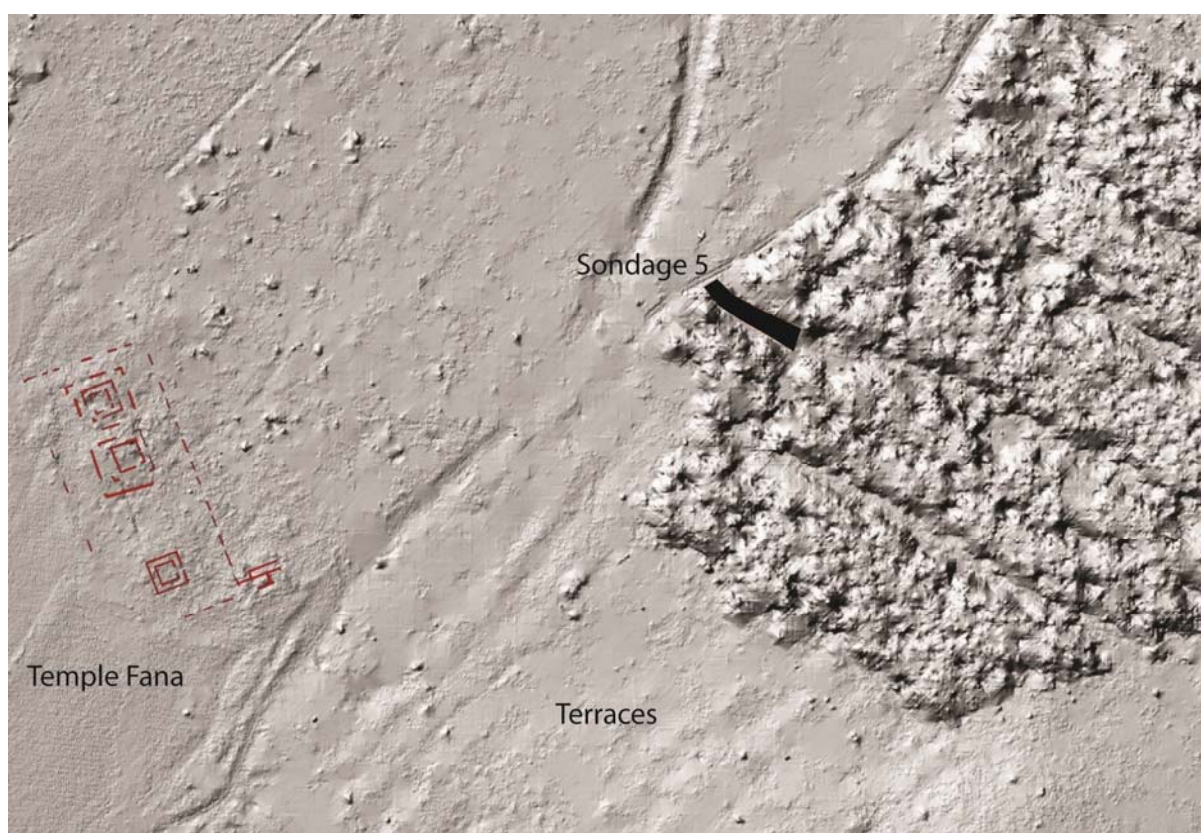


Figure 5: LiDAR of the Sources de l'Yonne area showing evidence for terracing and location of Sondage 5.

### **Results**

A clearer appreciation of the nature of activity at SDY has been created by this combined range of techniques. The survey work indicates dense spreads of Late La Tène material which combine to cover a contiguous area of finds of approximately 120 ha (Figure 4). This forms a distinctive 'horse-shoe' of activity on the northern slopes of La Grande Vente and eastern slopes of Mont Préneley, around the Yonne's source. The material varies in density, but comparison with surveys beyond these limits shows that SDY represents a large and dense cluster of material (see Figure 7).



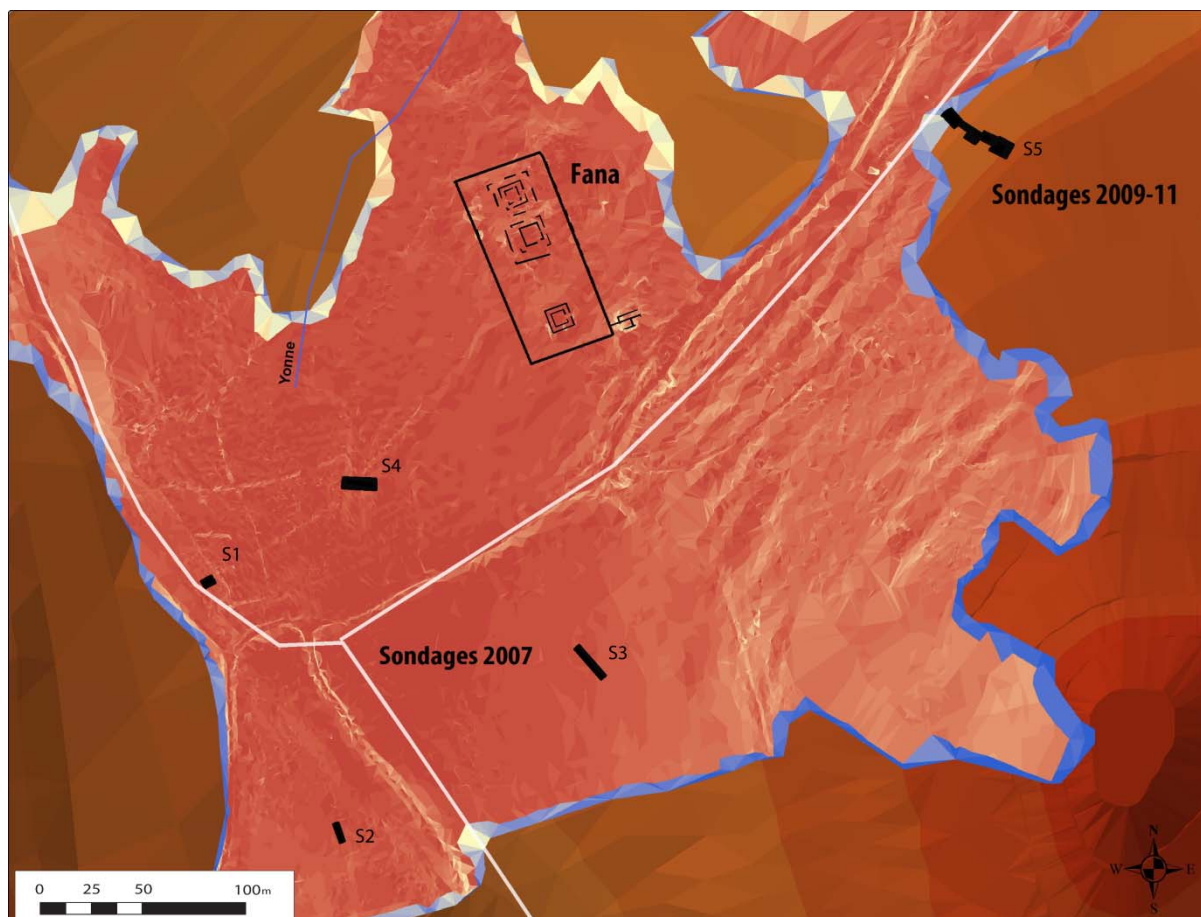


Figure 6: Excavation trench locations, 2007, 2009-11, in relation to the temple complex. The orange area shows the topographic survey undertaken for this area (image: Klenner)

Excavation of a number of areas to examine the nature, intensity and date of occupation, revealed intense occupation in *all* the areas examined. Sondages to the south and east of the traditional source of the Yonne (Figure 6, S2-4) revealed walled structures of La Tène D2b/Augustan date (50 BC to AD 15) whilst a sondage close to the source (S1) revealed gullies and a posthole probably of La Tène D2a (c. 90/80 to 50 BC) or D2b date (c. 50 to 30 BC)<sup>1</sup> beneath a small terrace of Augustan date. Excavations (S5) on the terraces situated on the slopes of La Grande Vente indicated they were probably constructed in La Tène D2b or, perhaps less likely, in La Tène D2a. Subsequent occupation on the terrace appears to consist of two major phases: the first consisting of cobbled and amphorae surfaces (Figure 8) associated with fence lines defining enclosed areas, probably related to post-built structures (cf. Péquiot, et al. 1996: 217); the second phase was represented by clay-floored, timber buildings and, perhaps somewhat later, by an elaborate drainage system (Figure 9) related to a masonry building. Finds included a rich assemblage of coarse and fineware ceramics, and a significant number of Iron Age and early Roman coins, including *Aedui*, *Lingones* and *Sequani* types.

The structural remains and material culture from these excavations closely resembles that from Bibracte. The walled buildings are recognisably similar to those revealed at the oppidum, whilst the drainage system parallels that from the high-status house (PC1) at Bibracte (cf. Paunier & Luginbühl, 2004: fig. 4.83). The terrace construction closely resembles those examined on the slopes of Bibracte, for example at Theurot de la Wivre; the latter appear to have been constructed in the La Tène D2b period (Dhennequin, et al. 2008: 41), probably contemporary with the terracing at SDY.

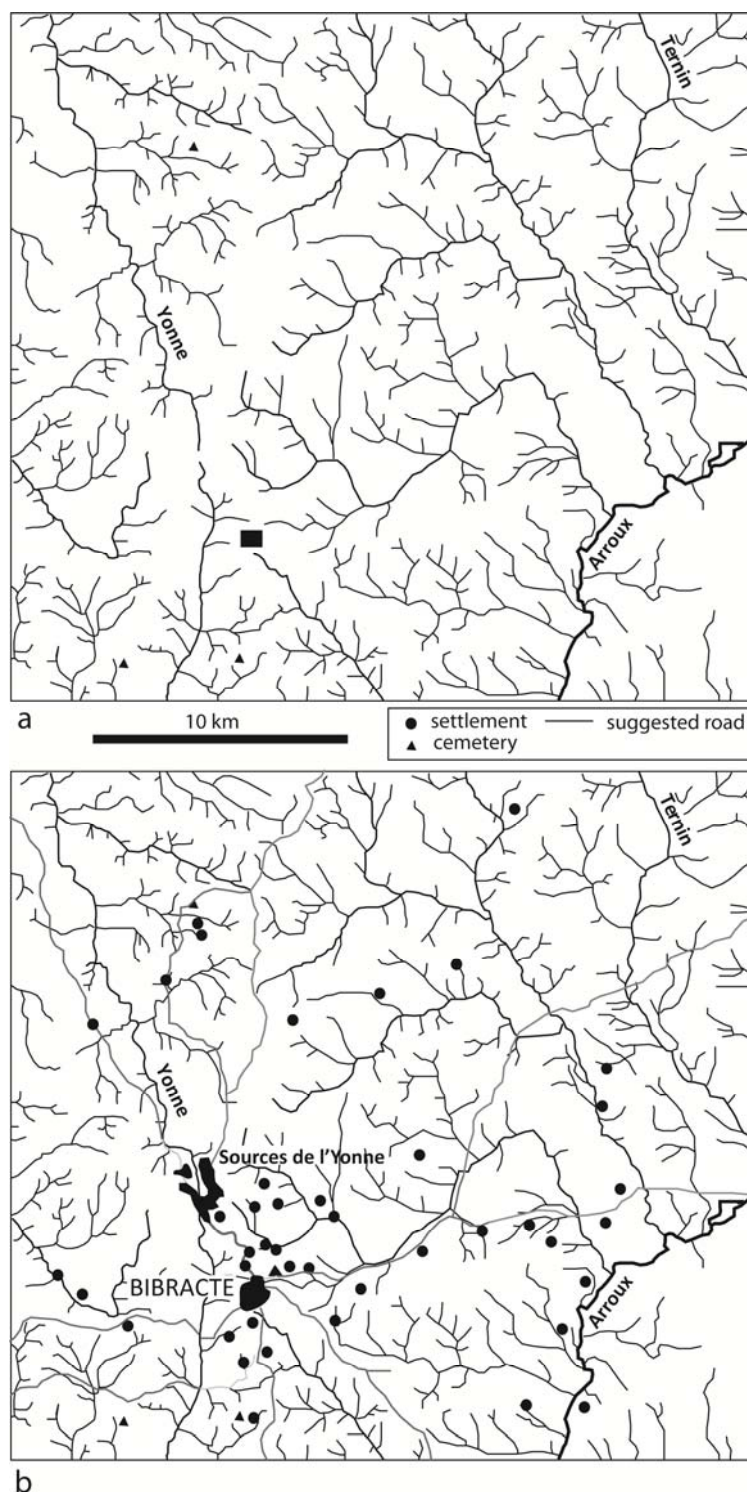


Figure 7: A comparison of evidence for (a) La Tène D1a and (b) La Tène D2 activity in the Bibracte environs (after Barral and Nouvel 2012, fig. 12)

A number of hearths and significant iron staining associated with the clay floored structures uncovered in sondage 5 are similar to structures and metal-workshops revealed at Côme-Chaudron on Bibracte (Dhennequin, et al. 2008: 68-77). An absence of slag and only small quantities of hammerscale from the SDY examples may argue against these being metal-workshops, although evidence of iron slag just to the north of the excavations indicates metalworking was taking place nearby. Analysis of the ceramics indicates an apparent higher proportion of finewares from the



areas excavated on the terraces, perhaps indicating variation in the status or nature of occupation across the site.

Longstanding research at Bibracte provides a detailed typo-chronology with which to compare the SDY ceramics (Barrier & Hoznour, 2009), allowing for relatively accurate dating of the complex. Assessment of the ceramic and amphorae assemblages (Braun et al. Forthcoming b; Olmer and Ponroy forthcoming) from sondages 1-5 indicates intense occupation in the La Tène D2b (50 to 30 BC) and Augustan periods (30 BC to AD 15), with the material from surface survey confirming this is likely to be the case across the complex (Braun forthcoming). There is potential for earlier activity in the form of possible La Tène D2a ceramics and residual Campanian wares (Braun et al. Forthcoming b). The limited evidence for pre-conquest material suggests, however, that any activity prior to the second-half of the first century BC was relatively ephemeral and/or was largely destroyed by the reworking of the landscape through the later terracing, which is likely to have taken place in La Tène D2b.

There is little to suggest activity at the complex went beyond the end of the Augustan era with almost no Gallo-Roman material similar to that occurring on sites in the Arroux Valley and at Autun (Braun forthcoming; Braun et al. Forthcoming b). Material from the temple itself suggests it may have continued somewhat later, indicated for example by *Terra Sigillata* with 2<sup>nd</sup> century AD stamps (Péquinot, et al. 1996: 224), but the complex appears to have been largely abandoned by the end of the first millennium BC.



Figure 8: Photograph of amphorae surface from Sources de l'Yonne, sondage 5 (Photo: Moore)



Figure 10: Photograph of drainage system from Sources de l'Yonne, sondage 5 (Photo: Moore)

### **Sources de l'Yonne and Late La Tène unenclosed agglomerations**

Revealing a major complex only c. three kilometres from Bibracte marks a significant new insight in to the place of the 'oppidum' within the broader landscape. Considering its scale and function it is tempting to regard SDY as comparable to Bibracte itself, sharing some of the same characteristics, in terms of consumption, activities and chronological development. The complex thus illustrates the problematic nature of definitions for 'oppida' and 'unenclosed agglomerations' (Woolf, 1993; Kaenel, 2006), emphasising that a simple dichotomy is potentially problematic. It also reinforces the picture from regional studies in central-eastern France (Barral & Nouvel, 2012), and further afield in the Auvergne (Poux, 2012), that oppida were potentially related to a complex array of agglomerated sites which served different, sometimes complementary, functions

### ***Chronology, location and size***

In order to understand SDY it is useful to compare it with other unenclosed agglomerations of the Late La Tène and early Roman period. These indicate that, despite some similarities, SDY differs from these in a number of ways both in its form and chronology. A number of enclosed oppida from elsewhere in central-eastern France have evidence of contemporaneous unenclosed sites in their vicinity, for example Avrolles, Tonnerre and Les Granges (Nouvel, 2011: 209; Barral & Nouvel, 2012).



The best studied oppida landscape to date, that around Corent and Gergovie in the Auvergne, demonstrates potentially some of the best parallels. In the Auvergne, the open settlement in the valley at Aulnat-Gandaillat may have been contemporaneous with the earliest phases of the oppidum at Corent, in La Tène D1a (Darteville, et al. 2008, 307; Poux, 2012: 245), although the evidence remains inconclusive. A closer parallel to SDY may be the unenclosed settlement at Le Bay, just below the oppidum. Whilst the site has only seen small-scale investigation, it appears to be contemporary to the oppidum (Poux, 2012: 45). The low-lying oppidum of Gondole also has evidence for areas of activity immediately outside its rampart (Deberge, et al. 2009: 58-70). Both examples show evidence for artisanal activity, perhaps deliberately relegated to the suburbs (Poux, 2012: 45). Both are dissimilar to SDY in a number of ways, however, being in immediate proximity to the oppidum and in low-lying locations. Meanwhile, Le Bay follows unenclosed agglomerations elsewhere, acting as a precursor to a Gallo-Roman settlement (Poux, 2012). Unlike the majority of agglomerations, however, it does not appear that SDY developed earlier than Bibracte, with current evidence indicating the site was a development of Bibracte, rather than its precursor. Those settlements with La Tène D evidence from elsewhere in eastern France also tend to be precursors of Gallo-Roman settlements (Barral & Nouvel, 2012: 142), unlike SDY which appears to have been largely abandoned in the early first century AD.<sup>2</sup>

Another striking difference between SDY and other agglomerations is its topographic location. Situated on the relatively steep slopes of the hills of La Grande Vente and Mont Préneley, forming a horseshoe of activity around the river source and the marshland, the site is in contrast to the majority of Late La Tène agglomerated settlements in central and eastern France which are situated in lowland locations. It is particularly notable that unlike the dense occupation to the north, the southern slopes of La Grande Vente facing Mont Beuvray are largely devoid of occupation. This ensures that, despite the large extent of occupation recorded by the surveys, little of this would have been visible from Bibracte itself. This is in stark contrast to suburban settlements like Le Bay near Corent, or the open sites at Avrolles and Tonnerre in Burgundy, which must have been clearly visible from adjacent hilltop centres. Was there a deliberate move to situate the sprawling complex at SDY away from the oppidum? The reasons for this are unclear but might include maintaining Bibracte's striking place in the landscape and suggest that the activities at SDY were deliberately situated discreetly from the oppidum.

The size of SDY also sets it apart from most unenclosed agglomerations (Figure 10). Survey finds indicate the area of occupation could be as much as 115-120 ha standing out markedly from the smaller scatters of material uncovered at a range of possible rural settlements elsewhere in the region (Figure 7; Barral and Nouvel, 2012). It is difficult to confirm this represents dense occupation across the entire area, but indications from excavations so far suggest this is likely to be the case. If SDY was indeed on such a scale, this sets it apart from other agglomerations, both in the region and further afield. Agglomerations at Tonnerre, Avrolles and Verdun-sur-Doubs in the Yonne, range between 15 and 20 ha (Nouvel, 2011). In the Loire valley agglomerations are similarly sized, for example Feurs (10 ha) and Roanne (40 ha, by the first century AD) and at Les Arènes, Indre (20-30 ha) (Buchsenschutz & Krausz, 2001: 297; Collis, et al. 2000: 75), whilst Le Bay in the Auvergne is likely to be no larger (Poux, 2012: 45). More comparable is the large lowland complex at Aulnat-Gandaillat, near Clermont Ferrand, probably encompassing some 200 ha, but it was abandoned by the beginning of the first century BC (Deberge, et al. 2007: 282; Trément, 2010: 86). Besançon, Doubs (120 ha) (Nouvel, 2011: 207), Chartres, Eure-et-Loir (170 ha) (Collis, et al. 2000: 79) and Sens, Yonne (Barral & Nouvel, 2012: 147), have comparable scales of occupation in La Tène D2, but follow

different trajectories, being the major regional oppida and subsequently Roman towns.<sup>3</sup> Meanwhile the large agglomeration (70 ha) at Gondole in the Auvergne whilst similar in date (La Tène D2) differs from SDY, both in its low-lying, confluence location and evidence of a rampart (Deberge, et al. 2009).<sup>4</sup> Recently, an unenclosed agglomeration has been recognised closer to Mont Beuvray at Monthelon, in the Arroux valley, but the site is much smaller (8 ha) and fieldwalking suggests it was occupied earlier, in La Tène C (Nouvel, et al. 2012).

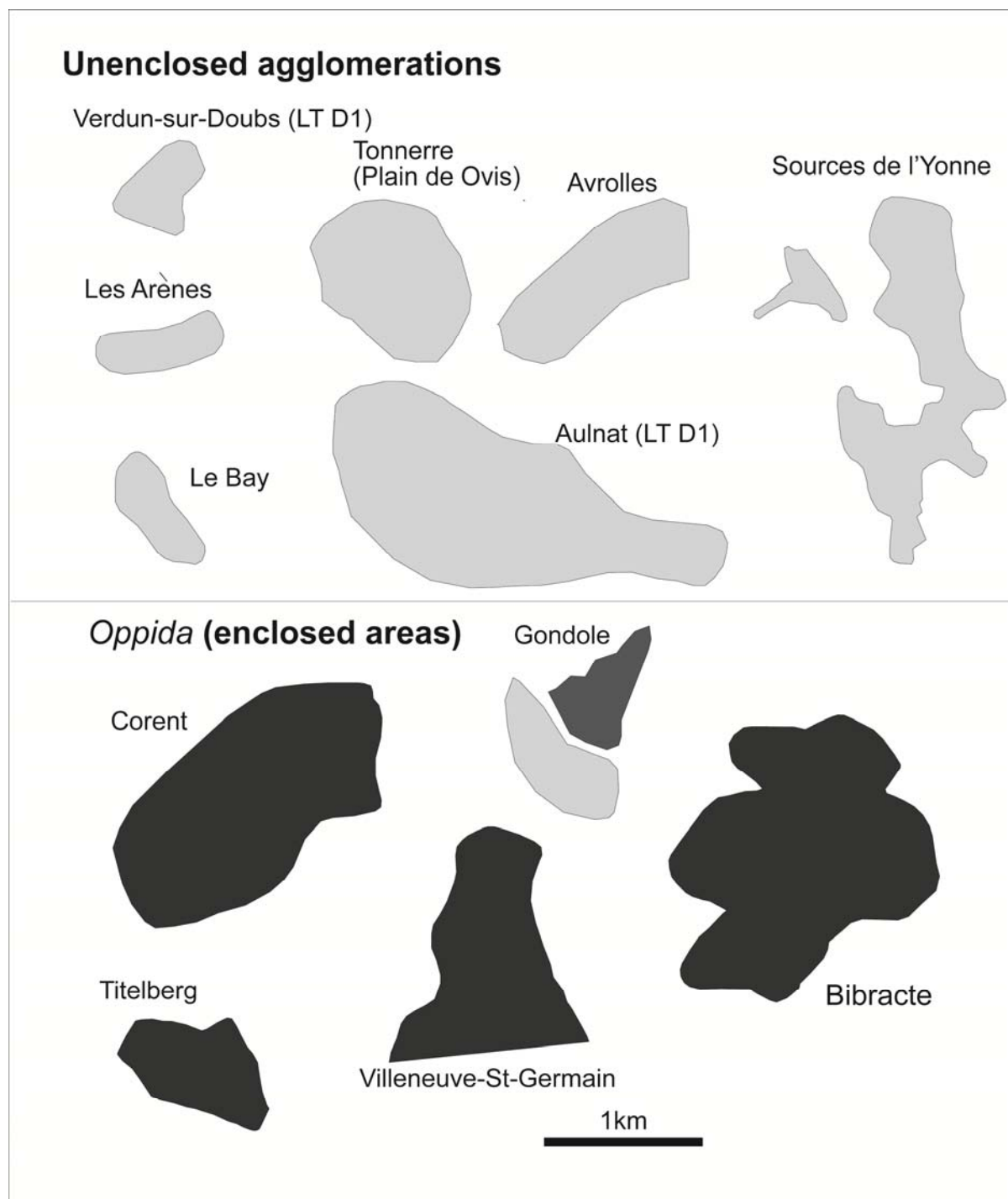


Figure 10: The comparative size of Sources de l'Yonne with selected other unenclosed agglomerations, Bibracte and oppida from eastern and central France (Image: Moore)

Most agglomerations appear to be located if not on, at least in proximity to, valley route ways, with many emerging as significant trade centres (Collis, et al. 2000: 81; Kaenel, 2006; Barral, 2011). Although SDY is not situated in a valley, it is located in relation to the claimed road between Bibracte and the oppidum of Alésia which passes through the complex (Kasprzyk & Nouvel, 2011: fig. 5). This may imply SDY's development should be better regarded as equivalent to a major road-side settlement; perhaps a product of Bibracte's increasing regional importance. The exact date and nature of such routes is uncertain however, and whether these routes referenced an existing settlement in this location or whether SDY grew up in relation to them remains debatable.

### ***Industrial area?***

Other unenclosed agglomerations often appear to have had a focus on craft activities (Kaenel, 2006: 31; Buchsenschutz & Krausz, 2001). SDY may reflect this pattern although there is little, as yet, to imply a purely industrial role, despite some evidence that metalworking was taking place in the form of some hammerscale from sondage 5 and iron slag found through surface survey. Recent surveys and environmental studies have also demonstrated significant evidence for mining in the immediate vicinity of Bibracte (for precious metals, lead and copper) which may, at least partly, be contemporary with occupation at SDY (Jouffroy-Bapicot, et al. 2007; Gourault 2010). This coincides with craft activity at Bibracte on an almost industrial scale (Dhennequin, et al. 2008: 77) and the presence of a secondary industrial area is not unlikely. However, like other unenclosed agglomerations, the complex may have been multifunctional, with quern stones from Sondage 2 and relatively high proportion of finewares in Sondage 5 hinting at the varied nature of occupation across the complex. There is limited evidence at present to argue that SDY was merely a poorer, artisanal neighbour to Bibracte; the quality of ceramics and the latest phase masonry buildings, could suggest a settlement of relatively similar status.

### ***Ritual complex?***

The location within the agglomeration of a Gallo-Roman temple associated with the source may also infer a ritual reason for the complexes' location. Gallo-Roman temple complexes associated with spring sites are well known from eastern France (De Cazanove & Joly, 2011: 665) and similar examples are known to begin as early as La Tène D1 (Izri & Nouvel, 2011). A number of other agglomerations appear to have been focused around temple complexes, and this appears to represent the origins of a number of such sites elsewhere in eastern France (Barral & Nouvel, 2012) and beyond (cf. Salač 2012). Elsewhere in Gaul, at Acy-Romance, Ardennes, a group of temples appear to be the focus of an agglomeration which is otherwise an agriculturally based settlement, rather than a centre of exchange or craft specialisation (Fichtl, 2005: 173). Sanctuaries have also been regarded as the origins of some enclosed oppida (Fichtl, et al. 2000; Barral, 2011: 211; Poux, 2012; cf. Wendling this volume), indicating they may have had roles as communal meeting places for wider communities.

A possible role as a sacred centre may also be indicated by SDY's location. The complex is not only situated at the source of the Yonne (a major tributary of the Seine), but also on the watershed between those rivers that flow north, to the Channel (e.g. Yonne/Seine), and those that flow to meet the Loire and the Atlantic (e.g. Arroux). The place of watersheds as ritually significant in the Roman period has been recognised (Goldberg, 2009: 194), and the fundamental nature of this location in both symbolic and political geography may not have gone unnoticed in the first century BC.

### ***Suburbium?***

From its chronology, location and size, SDY differs from other unenclosed agglomerations identified elsewhere in the region and in France more broadly. The best explanation for the complex is that it formed a suburban satellite to Bibracte on a scale not yet recognised at other oppida. Activity at the oppidum itself saw a period of significant redevelopment and elaboration in the late first century BC, with the construction of monumental buildings, including a Roman style Basilica (Dhenequin, et al. 2008: 67), masonry basins (Barral & Richard, 2010) and elaborate private buildings (Paunier & Luginbühl, 2004: 39). It is perhaps not surprising that it is in this period that areas beyond the hilltop also saw significant amounts of activity. Dating evidence suggests the complex followed the fortunes of Bibracte, flourishing in the latter half of the first century BC and declining at the end of the Augustan period. Similarly, at Bibracte, whilst occupation continued into the Tiberian era (AD 1/15 to AD 30), this comprised only the high-status peristyle houses (Paunier & Luginbühl 2004; Barrier, forthcoming) and sanctuaries (Beck, et al. 1988), whilst significant numbers of the community moved elsewhere, most likely to the new Roman town of Autun.

As noted above, whilst there are examples of open settlements contemporary with fortified oppida elsewhere in central and eastern France (Barral & Nouvel, 2012), there is little precedent for oppida in the region, or in Gaul more generally, to have a suburban settlement in their immediate vicinity as substantial as SDY. Few oppida have seen intense environs surveys, yet the increasingly well-understood landscapes of central and eastern French oppida (e.g. Barral & Nouvel, 2012; Poux, 2012) indicate that none have quite the same sequence as seen at SDY and Bibracte. The scale and location of SDY suggests, therefore, that it had potentially different roles, but also emphasises (as sites elsewhere in eastern France and the Auvergne do), the increasing need to interrogate the immediate environs of enclosed oppida. It may suggest too that Bibracte's pre-eminence as a significant centre in central and eastern Gaul provides a unique landscape and settlement context.

The construction of enclosures around oppida is often regarded as a crucial element in the social and symbolic status of such sites (see Wendling this volume). Even Caesar, in his description of Vesontio (Besançon), appears to distinguish between the enclosed citadel and lower town (BG I, 38). In noting the lack of such enclosure around SDY and its role as a potential 'suburb' we should, however, perhaps be careful not to necessarily infer that it merely represented an 'overspill' to Bibracte. Its discreet location and focus around the Yonne source indicates that it had a distinctive, perhaps complementary, role. However, as many have argued for the Roman urban periphery (Goodman, 2007), in many instances whilst these settlements had identities and functions separate from their seemingly more important urban neighbours, they cannot be regarded as entirely separate entities.

### **Late La Tène settlement disruption**

The scale of activity at SDY over a relatively short period can be best understood within the wider processes of settlement change across Gaul at the end of the Iron Age. This is represented by broader rural settlement decline and disruption; to the north, the La Bassée region of Burgundy witnessed an apparent decline of settlement in the La Tène D2 and Augustan period (at least in the valleys), and a similar picture is seen in other regions, such as Picardy (Haselgrove & Guichard forthcoming). This picture is complex, however, with expansion in other areas (Nouvel, et al. 2009), suggesting the major changes underway had varied impacts on Iron Age communities.



There is growing evidence that the environs of Bibracte saw a similarly turbulent time. Although, the nature of settlement in the Bibracte environs remains relatively poorly understood, recent survey work indicates that sites of La Tène C and D1 are rare (Creighton, et al. 2008; Barral & Nouvel, 2012: 155), but that a more widespread expansion of settlement may have taken place in La Tène D2 (90 to 30 BC; Figure 7). Whilst the data are problematic, there are hints from eastern France and from the vicinity of Bibracte that there was a major reorganisation of settlement in La Tène D2, possible coeval with SDY's development, which was then followed by its, and Bibracte's, heyday. It is hard to estimate the density of occupation at SDY and Bibracte, but if most of the areas identified were intensively occupied, as excavations imply, we must consider a large population, perhaps in excess of 20,000 combined at both sites (Brun & Ruby 2008: 146), suggesting a significant relocation of large numbers of people. There remains a problem of chronological resolution; if SDY was occupied intensively for only a few decades it may not be possible to recognise this clearly from the ceramic record. It is also clear that the pattern was not a simple one: whilst settlement declined in some areas, elsewhere it expanded (Nouvel, et al. 2009). However, the La Tène D2 was clearly a period of disruption, after an apparent expansion of rural settlement in La Tène D1 (150 to 90 BC). In addition, detailed surveys of similar regions, such as the Auvergne, has revealed a dynamic relationship between enclosed 'oppida' and unenclosed sites over a relatively small area (Figure 11; Darteville, et al. 2009; Trément, 2010; Poux, 2012). SDY does not, however, appear to coincide with the process of disruption associated with the development of the larger oppidum in the second century BC, as seen elsewhere, but a later, mid-first century BC process, perhaps more similar to the emergence of relatively short lived sites, such as Gondole (c. 70 to 20 BC) in the Auvergne (Trément, 2010: 88).

Whilst a decline in rural settlement contemporary with SDY and Bibracte seems uncertain, another possibility is the movement of large numbers of people to the Bibracte environs for other reasons. In the *Gallic Wars* (BG I, 28), Caesar describes how the *Boii*, allies of the *Helvetii*, who had been defeated at the battle of Bibracte in 58 BC, were resettled in territory of the *Aedui*. Caesar claimed 32,000 *Boii* had originally migrated with the *Helvetii*, according to written records uncovered in their baggage train (BG I, 29). Caesar claims these people were subsumed into the *Aedui* and that the *Boii* were resettled at other 'oppida' (BG VII, 9; usually regarded as Gorgobina - Sancerre). Leaving the veracity of Caesar's numbers to one side, could this represent the reason for the large scale expansion of settlement represented by SDY (Haupt, et al. 2007: 416)? It is possible that such groups might also have been resettled elsewhere and the Sources de l'Yonne complex does appear to have emerged, or was at least significantly expanded, around the time of the Gallic Wars or immediately after.

The current chronology of SDY means that we cannot be certain that its construction began immediately after the Gallic Wars as it may have begun in the La Tène D2a, prior to the Gallic Wars. Tying the emergence of the complex to a single historical event is also fraught with problems. However, the late second and first century BC was clearly a period of significant social and political upheaval where the movement of large numbers of people, the nucleation of communities in some areas, and the abandonment of settlements elsewhere, was taking place across much of Gaul (Collis et al. 2000, 81; Haselgrove and Guichard forthcoming). Whether SDY represents the resettlement of some of the *Boii* defeated by Caesar or not, it seems from the evidence from both SDY and Bibracte, that large numbers of people were settling in and around Bibracte. This is likely to relate to the increasingly important role of Bibracte as a political and economic centre, drawing people to supply the foodstuffs, equipment and clothing of a burgeoning population.

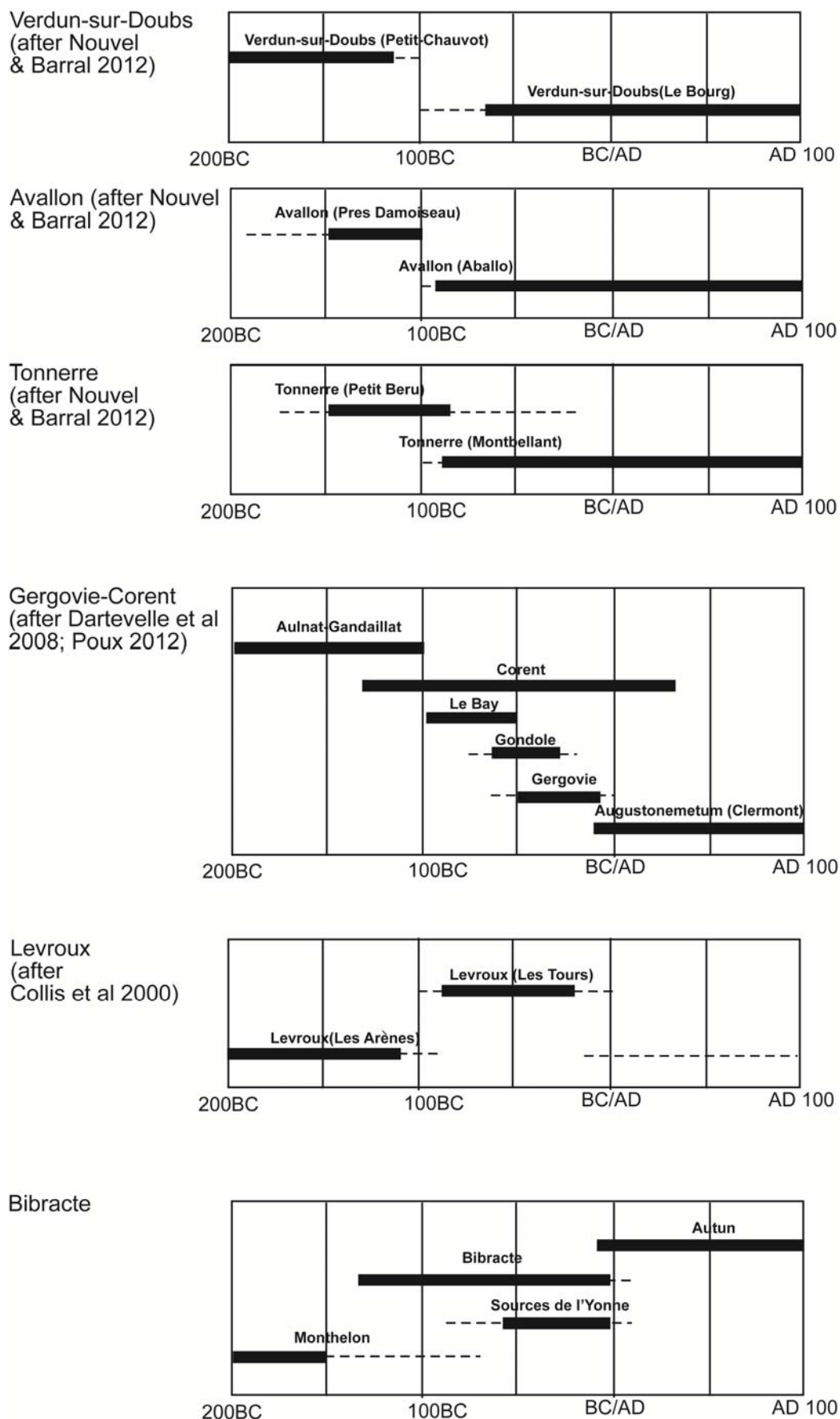


Figure 11: Dating comparison between the Bibracte environs and other complexes in central and eastern France (Image: Moore)

The decline of the SDY complex is more easily explained. The limited evidence for activity in the Tiberian era corresponds with the expansion of Autun as a significant settlement from c. 10 BC (Barral & Nouvel, 2012: 156; Barrier, forthcoming). The vast majority of the populace presumably migrated to Autun or rural settlements and small towns in the immediate vicinity. SDY thus reflects the broader brief experiments in Iron Age proto-urbanism, to be extinguished by a more uniform Roman model.

### **Conclusions and future perspectives**

Investigations at Sources de l'Yonne adds to the increasingly complex picture being drawn for settlement development in the Late La Tène of Gaul. The model of movement from lowland open settlement to upland oppidum no longer reflects the increasingly diverse and complex patterns of unenclosed agglomerations and hilltop sites, sometimes existing contemporaneously, at other times sequentially (Figure 11; Nouvel, 2011; Barral & Nouvel, 2012; Poux, 2012). SDY provides a new, previously unrecognised sequence within this picture and has significant implications for our consideration of the process of settlement change associated with Bibracte, and at the end of the Iron Age in Gaul in general. Its existence emphasises that the heyday of Bibracte led to extremely large numbers of people congregating around these focal places with an impact beyond the immediate limits of Mont Beuvray. The possibility that large suburbia may exist beyond the bounds of other oppida is a tantalising one. However, comparison with the other well-studied landscapes in the Auvergne and northern Burgundy indicates that, despite potential similarities, the Bibracte environs followed a different path to sites elsewhere. Although the scale of social and political upheaval with which these locales are associated has been acknowledged, the implication from SDY is that this was on a scale seldom recognised. Such activity was, however, short lived, perhaps a few decades of intensive occupation before abandonment. SDY thus adds to the growing impression that the first century BC represented a period of significant settlement and social upheaval across much of Western Europe (Haselgrove & Guichard forthcoming) with many of the large sites known as oppida marking a short period of elaborate change. Both Bibracte and SDY might, therefore, best be seen as failed attempts at, respectively, urban centres and vici to be replaced by a Gallo-Roman model.

The survey work at SDY emphasises the value of landscape investigation to elucidate such patterns and the value of combining numerous techniques (survey, excavation, geophysics and LiDAR) to clarify better the role of such complexes (Haupt 2012), as well the value of perseverance in landscapes challenging to archaeological survey. Much remains to be understood of the complex, however. As with many Late La Tène agglomerated settlements, the evidence remains fragmentary and a clear picture of the site's chronological development and nature of activity remain to be fully understood. The nature of the complex's spatial organisation and extent to which activities were zoned, as recognised at other agglomerations (e.g. Collis, et al. 2000: 81), also requires further investigation.

This study emphasises, as John Collis argued sometime ago (Collis, 1984: 189), that the focus on historically significant and well-known oppida continues to draw the focus of research, leading to partial perspectives on the nature of these sites and their wider context. The study of the Bibracte environs reflects similar studies in central and eastern France (e.g. Darteville, et al. 2009; Poux 2012; Barral & Nouvel, 2012), which emphasise the variety of settlements occupied in the second

and first century BC and the inter-relationship between enclosed and unenclosed sites, developing more complex settlement trajectories than earlier models suggested.

For the SDY complex, it is hoped future research will provide further clarity on the chronology of the complex, in particular the potential for earlier antecedents. Whether there really was a diminution of settlement in the wider landscape, contemporary with occupation at Bibracte and Sources de l'Yonne, also remains a fundamental question and it is clear these sites must be understood within a broader picture of regional settlement dynamism. Continued survey work in the region (e.g. Nouvel, 2012) is thus required to provide a clear picture of the possibilities of nucleation and intensification over the late La Tène.

### Acknowledgments

This research has been supported by the Centre archéologique européen and we would like to express our thanks to the staff there, particularly Vincent Guichard and Pascal Paris, for their support. Individual elements have been supported by a variety of funding: the surface surveys by Mainz University and RGZM (2005-2010) by the Deutsche Forschungsgemeinschaft; the 2007 Durham and Reading excavations by the British Academy (SG-45911) and the University of Reading; the 2009-11 excavations by Howard Community College, Centre archéologique européen and Durham University; the geophysical surveys in 2005 by Reading and Durham Universities. Thanks also to Colin Haselgrove for his comments on an earlier draft of this paper, Tom Fitton for assistance with site plans and Fabienne Olmer for her comments on the amphorae assemblage.

### Notes

<sup>1</sup>The dates of La Tène D2a and D2b used here are based on the current chronology devised for Bibracte itself (see Dhennequin, et al. 2008).

<sup>2</sup>Also, as Barral and Nouvel (2012: 142) note, whilst La Tène D2 open settlements are rarer in eastern France, more may have existed but lie unrecognised beneath Roman settlements. SDY may, therefore, be unusual in not developing in to a Roman settlement, perhaps because of its unusual topographic location.

<sup>3</sup> At Sens the upland site at the Chateau close to Villeneuve-sur-Yonne, emerging in La Tène D2a (Barral and Nouvel, 2012: 147) may, however, imply a more similar sequence to that at SDY.

<sup>4</sup> Although the latter appears to have been infilled by the La Tène D2b or Augustan period (Deberge, et al. 2009: 32)

### References

- Audouze, F. and Buchsenschutz, O. 1992. *Towns, Villages and Countryside of Celtic Europe*. London: Batsford.
- Barral, P. 2011. Dynamique de création et de Romanisation des agglomérations dans l'est de la France. In: M. Reddé, P. Barral, F. Favory, J-P. Guillaumet, M. Joly, J-Y. Marc, P. Nouvel, L. Nuninger, & C. Petit, eds. *Aspects de la Romanisation de la Gaule*. Glux-en-Glenne: Collections Bibracte 21, pp. 207-214.
- Barral, P., Luginbühl, T. & Nouvel, P. 2012. Topographie et fonctions religieuses sur l'oppidum de Bibracte et à sa périphérie. In: O. De Cazanove, ed. *Autour de l'inventaire des lieux de culte antiques en Bourgogne table ronde internationale organisée par l'UMR ARTeHIS, Dijon, 18-19 septembre 2009*. Dijon: ALUB.
- Barral, P. & Nouvel, P. 2012. La dynamique d'urbanisation à la fin de l'âge du Fer dans le Centre-Est (Bourgogne – Franche-Comté). In: S. Sievers & M. Schönfelder, eds. *Die Frage der Protourbanisation in*



- der Eisenzeit/ La question de la proto-urbanisation à l'âge du Fer Actes du 34<sup>ème</sup> colloque de l'AFEAF, Aschaffenburg, 24-26 mai 2010.* Bonn: Dr. Rudolf Habelt GmbH, pp. 139-164.
- Barral, P. & Richard, H. 2009. *Fouilles de la fontaine Saint-Pierre au Mont Beuvray. Aménagements d'une source sur l'oppidum de Bibracte.* Glux-en-Glenne: Collections Bibracte 17.
- Barrier, S. & Hoznour, J. 2009. Le mobilier céramique. In: V. Guichard, ed. *Bibracte. Rapport annuel d'activité 2009.* Glux-en-Glenne, Centre archéologique européen du Mont Beuvray, pp. 211-214.
- Barrier, S. Forthcoming. Etat des questions sur la fin de l'occupation de Bibracte et sa fréquentation durant le Haut et le Bas-Empire. Ensembles de référence, cartographie des marqueurs céramologiques et numismatiques. In *Etudes sur Bibracte 2.* Glux-en-Glenne : Collections Bibracte.
- Beck, F., Brunaux, J-L., Gruel, K. & Enault, J-F. 1988. Mont Beuvray. Fouilles de la Chapelle (1984-1985). *Revue archéologique de l'est et centre-est* 39(1-2): 107-127.
- Braun, A. Forthcoming. Spektrum und Datierung der Funde aus den archäologischen Prospektionen. In: P. Haupt & M. Schönfelder, eds. *Eine spätkeltische Großsiedlung im Umfeld des oppidums von Bibracte. Ergebnisse der archäologischen Forschungen zur antiken Besiedlung des Umlandes des Mont Beuvray 2005 – 2011.* Glux-en-Glenne: Collection Bibracte.
- Braun, A., Cripps, L., Haupt, P., Klenner, I. & Moore, T. 2010. Sondages aux Sources de l'Yonne. In: V. Guichard, ed. *Bibracte. Rapport annuel d'activité 2009:* 265-274. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray.
- Braun, A., Creighton, J., Cripps, L., Klenner, I., & Moore, T. Forthcoming a. Excavations and Geophysical Survey at Sources de l'Yonne 2005-11. In: P. Haupt & M. Schönfelder, eds. *Eine spätkeltische Großsiedlung im Umfeld des Oppidums von Bibracte Ergebnisse der archäologischen Forschungen zur antiken Besiedlung des Umlandes des Mont Beuvray 2005 – 2009.* Glux-en-Glenne: Collection Bibracte.
- Braun, A., Moore, T. & Ponroy, C. Forthcoming b. The ceramics, in A. Braun, J. Creighton, L.Cripps, I.Klenner & T. Moore. Excavations and geophysical survey at Sources de l'Yonne 2005-11. In: P. Haupt & M. Schönfelder, eds. *Eine spätkeltische Großsiedlung im Umfeld des Oppidums von Bibracte Ergebnisse der archäologischen Forschungen zur antiken Besiedlung des Umlandes des Mont Beuvray 2005 – 2009.* Glux-en-Glenne: Collection Bibracte.
- Brun, P. & Ruby, P. 2008. *L'âge du fer en France. Premières villes, premiers états celtiques.* Paris: La Découverte.
- Buchsenschutz, O. & Richard, H. 1996. *L'environnement du Mont Beuvray.* Glux-en-Glenne: Collection Bibracte 1.
- Buchsenschutz, O. & Krausz, S. 2001. Levroux et le modèle de la genèse des oppida. In: Collis, J., ed. *Society and settlement in Iron Age Europe. Actes du XVIII<sup>e</sup> colloque de l'AFEAF, Winchester, April 1994.* Sheffield: J.R. Collis publications, pp. 292-298.
- Buchsenschutz, O., Cribellier, C., Luberne, A., Pescher, B. and Troadec, J. 2009. Réflexions sur 40 ans de fouilles à Bourges (Cher) et à Levroux (Indre). In: Buchsenschutz, O., Chardenoux, M.-B., Krausz, S. & Vaginay, M., eds. *L'âge du Fer dans la boucle de la Loire. Actes du XXXII<sup>e</sup> colloque de l'Association Française pour l'Etude de l'âge du Fer. Bourges, 2008.* Paris: AFEAF/Tour: RACF Supp. 35, pp. 237-250
- Collis, J. 1984. *Oppida. Earliest towns north of the Alps.* Sheffield: Sheffield Academic Press.
- Collis, J., Krausz, S. & Guichard, V. 2000. Les village ouverts en Gaule centrale aux II<sup>e</sup> et I<sup>er</sup> siècles av. J.-C.. In: V. Guichard, S. Sievers & O. Urban, eds. *Les processus d'urbanisation à l'âge du Fer. Actes du colloque, Glux-en-Glenne, 8-11 juin 1998.* Glux-en-Glenne: Collection Bibracte 4, pp. 73-82.

- Creighton, J. & Moore, T. 2008. Sondages au site des Sources de l'Yonne, commune de Glux-en-Glenne. In: V. Guichard, ed. *Bibracte. Rapport Annuel d'Activité 2007*: 210. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp. 211-218.
- Creighton, J., Haupt, P., Klenner, I., Moore, T., Nouvel, P., Petit, C. & Schönfelder, M. 2007. Prospections autour de Bibracte: Nouvelles méthodes et nouveaux résultats. *Bulletin intérieur de l'AFEAF* 25: 17-20.
- Creighton, J., Haselgrove, C., Lowther, P. & Moore, T. 2008: Becoming Roman in Southern Burgundy: A Field Survey Between Autun and Bibracte in the Arroux Valley (Saône-et-Loire), 2000-2003. *Internet Archaeology* 25. Available at: [http://intarch.ac.uk/journal/issue25/creighton\\_index.html](http://intarch.ac.uk/journal/issue25/creighton_index.html)
- Crumley, C & Marquardt, W. 1987. *Regional Dynamics: Burgundian Landscapes in Historical Perspective*. San Diego: Academic Press.
- Darteville, H., Mennessier-Jouannet, C. & Arbaret, N. 2009. La capitale des Arvernes, une histoire en boucle. In: O. Buchsenschutz, M.-B Chardenoux, S. Krausz & M. Vaginay, eds. *L'âge du fer dans la boucle de la Loire. Actes du XXXIIe colloque de l'Association Française pour l'étude de l'âge du fer, Bourges, 2008*. Paris: AFEAF, pp. 293-315.
- Deberge, Y., Vermulen, C. & Collis, J. 2007. Le complexe de Gandaillat/La Grande borne: un état de la question. In: C. Mennessier-Jouannet & Y. Deberge, eds. *L'archéologie de l'âge du fer en Auvergne: XXVIIe colloque de l'Association Française pour l'étude de l'âge du fer, Clermont Ferrand, 2003*. Lattes: Monographies d'archéologie méditerranéenne, pp. 267-289.
- Deberge, Y., Cabezuelo, U., Cabanis, M., Foucras, S., Garcia, M., Gruel, K., Loughton, M., Blondel, F. & Caillat, F. 2009. L'oppidum arverne de Gondole (Le Cendre, Puy-de-Dôme). Topographie de l'occupation protohistorique (La Tène D2) et fouille du quartier artisanal: un premier bilan, *Revue archéologie du Centre de la France* 48. Available at : <http://racf.revues.org/1280>.
- De Cazanove, O. & Joly, M. 2011. Les lieux de culte du nord-est de la Gaule à l'époque de la Romanisation. Sanctuaires ruraux, sanctuaires d'agglomération, rites et offrandes. In: M. Reddé, P. Barral, F. Favory, J-P. Guillaumet, M. Joly, J-Y. Marc, P. Nouvel, L. Nuninger, & C. Petit, eds. *Aspects de la Romanisation dans l'Est de la Gaule*: 663-667. Glux-en-Glenne: Collections Bibracte 21, pp. 663-672.
- Dhennequin, L., Guillaumet, J-P. & Szabo, M. 2008. L'oppidum de Bibracte (Mont Beuvray, France) Bilan de 10 années de recherches (1996-2005). *Acta Archaeologica Academiae Scientiarum Hungaricae* 59: 1-152.
- Fichtl, S. 2005. *La Ville Celtique. Les oppida de 150 av. J.-C. à 15 ap. J.-C.* 2nd edition. Paris: Editions Errance.
- Fichtl, S., Metzler, J. & Sievers, S. 2000. Le rôle des sanctuaires dans le processus d'urbanisation. In: V. Guichard, S. Sievers & O. Urban, eds. *Les processus d'urbanisation à l'âge du Fer. Actes du colloque, Glux-en-Glenne, 8-11 juin 1998*. Glux-en-Glenne: Collection Bibracte 4, pp. 65-72.
- Goodman, P. 2007. *The Roman City and Its Periphery. From Rome to Gaul*. London: Routledge.
- Goldberg, M. 2009. The Dichotomy in Romano-Celtic Syncretism: Some Preliminary Thoughts on Vernacular Religion. In: M. Driessen, S. Heeren, J. Hendriks, F. Kemmers & R. Visser, eds. *TRAC 2008. Proceedings of the eighteenth annual Theoretical Roman Archaeology Conference, University of Amsterdam, 4-6 March, 2008*. Oxford: Oxbow, pp. 187-202.
- Gourault, C. 2010. Activités d'extraction: prospections minières en Haut Morvan. In: V. Guichard, ed. *Rapport annuel d'activité 2009*: Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp. 251-262.
- Hammond, C. 1996. *Caesar. The Gallic War*. Oxford: Oxford University Press.

- Haselgrove, C. 1996. Roman Impact on Rural Settlement and Society in Southern Picardy. In: N. Roymans, ed. *From the Sword to the Plough: Three Studies on the Earliest Romanization of Northern Gaul*. Amsterdam: Amsterdam Archaeological Studies 1, pp. 127-88.
- Haselgrove, C. & Guichard, V. Forthcoming. *Les Gaulois sont-ils dans la plaine? Reflections on settlement patterns in Gaul in the 1st century BC*.
- Haupt, P. & Klenner, I. 2009. Prospections au site de Quart du Bois, commune de Poil. In: V. Guichard, ed. *Rapport annuel d'activité 2008*. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp. 431-432.
- Haupt, P., Klenner, I. & Schönfelder, M. 2007. Prospections im Umfeld des Oppidums Bibracte (Burgund) – ein Vorbericht. *Archäologisches Korrespondenzblatt* 37: 409-419.
- Haupt, P. 2012. *Landschaftsarchäologie. Eine Einführung*. Darmstadt & Stuttgart: Theiss.
- Izri, s. & P. Nouvel. 2011. Les sanctuaires du nord-est de la Gaule. Bilan critique des données. In: M. Reddé, P. Barral, F. Favory, J-P. Guillet, M. Joly, J-Y. Marc, P. Nouvel, L. Nuninger, & C. Petit, eds. *Aspects de la Romanisation dans l'Est de la Gaule*. Glux-en-Glenne: Collections Bibracte 21, pp. 507-532.
- Jouffroy-Bapicot, I., Petit, C., Monna, F. & Richard, H. 2007. Evolution de la végétation du massif du Morvan : résultats des premières analyses polliniques et mise en évidence de l'impact des activités paléometalluriques. *Revue scientifique Bourgogne-Nature. Hors series*, 3: 97-104
- Kaenel, G. 2006. Agglomérations et oppida de la fin de l'âge du Fer: une vision synthétique. In: C. Haselgrove, ed. *Celtes et Gaulois l'Archéologie face à l'Histoire. Les mutations de la fin de l'âge du Fer*. Glux-en-Glenne: Collections Bibracte 12/4, pp. 17-40.
- Kasprzyk, M. & Nouvel, P. 2011. Les mutations du réseau routier de la période laténienne au début de la période impériale. Apports des données archéologiques récentes. In: M. Reddé, P. Barral, F. Favory, J-P. Guillet, M. Joly, J-Y. Marc, P. Nouvel, L. Nuninger, & C. Petit, eds. *Aspects de la Romanisation dans l'Est de la Gaule*. Glux-en-Glenne: Collections Bibracte 21, pp. 21-42.
- Moore, T. 2011. Les sites majeurs de la périphérie du Mont Beuvray. Sondages aux Sources de l'Yonne. In: V. Guichard, ed. *Bibracte. Rapport annuel d'activité 2010*. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp. 423-442.
- Nouvel, P. 2011. La Tène and Early Gallo-Roman Settlement in Central Gaul: An Examination of the Boundary Between the Aedui, Lingoni and Senoni (Northern Burgundy, France). In: T. Moore & X-L. Armada, eds. *Atlantic Europe in the First Millennium BC: Crossing the divide*. Oxford: Oxford University Press, pp. 205-222.
- Nouvel, P., Barral, P., Deffressigne, S., Riquier, V., Séguier, J-M., Tikonoff, N. & Zehner, M. 2009. Rythmes de création, fonctionnement et abandon des établissements ruraux de la fin de l'Âge du Fer dans l'Est de la France. In: I. Bertrand, A. Duval, J. Gomez de Soto & P. Maguier, eds. *Habitats et paysages ruraux en Gaule et regards sur d'autres régions du monde celtique. Actes du XXXIe colloque de l'AFEAF*. Chauvigny: Mémoire de l'Association des Publications Chauvinoises 35, 109-149.
- Nouvel, P. 2012. Les prospections systématiques. In: V. Guichard, ed. *Bibracte. Rapport Annuel d'Activité 2011*. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp.489-556.
- Olmer, F. & Ponroy, C. Forthcoming. The amphorae 2007-2011, in A. Braun, J.Creighton, L.Cripps, I.Klenner & T. Moore. Excavations at Sources de l'Yonne 2009-11. In: P. Haupt & M. Schönfelder, eds. *Eine spätkeltische Großsiedlung im Umfeld des Oppidums von Bibracte Ergebnisse der archäologischen Forschungen zur antiken Besiedlung des Umlandes des Mont Beuvray 2005 – 2009*. Glux-en-Glenne: Collection Bibracte.

- Paunier, D. & Luginbühl, T. 2004. *Bibracte. Le site de la maison 1 Parc aux Chevaux (PC1) des origines de l'oppidum au règne de Tibère*. Glux-en-Glenne: Collection Bibracte 8.
- Péquinot, C., Picard, G., Pasquet, A., Fischer, B. & Meissonnier, J. 1996. Le sanctuaire des sources de L'Yonne, Commune de Glux, Nièvre. *Revue Archéologique de l'est* 47: 209-231.
- Poux, M. 2012. *Corent: Voyage au cœur d'une ville gauloise*. 2<sup>nd</sup> edition. Paris: Editions errance.
- Rebourg, A. 1998. L'urbanisme d'Augustodunum. *Gallia* 55: 141-236.
- Salač, V. 2012. Les oppida et les processus d'urbanisation en Europe centrale. In: S. Sievers & M. Schönfelder, eds. *Die Frage der Protourbanisation in der Eisenzeit. La question de la proto-urbanisation à l'âge du Fer. Akten des 34. internationalen Kolloquiums der AFEAF vom 13.-16. Mai 2010 in Aschaffenburg*. Bonn: Koll. Vor- u. Frühgesch. 16.
- Schubert, F. 2008. Programme Geotopocart. In: V. Guichard, ed. *Bibracte. Rapport annuel d'activité 2007*. Glux-en-Glenne: Centre archéologique européen du Mont Beuvray, pp. 57-66.
- Trément, F. 2010. Romanisation et dynamiques territoriales en Gaule centrale. Le cas de la cité des Arvenes (Ile s. av. J-C. – Ile s. ap. J-C.). In: C. Corsi & F. Vermeulen, eds. *Changing Landscapes. The Impact of Roman Towns in the Western Mediterranean. Proceedings of the International Colloquium, Castelo de Vide – Marvão, 15<sup>th</sup>-17<sup>th</sup> May 2008*. Bologna: Ante Quem, pp. 85-104.
- Woolf, G. 1993. Rethinking the oppida. *Oxford Journal of Archaeology* 12(2): 223-234.



### Biographical Notes:

Tom Moore is a Senior Lecturer in the Department of Archaeology, Durham University and member of the committee of the *Prehistoric Society*. His research focuses on the Iron Age of Britain and France, with a particular focus on landscape archaeology.

Address: Department of Archaeology, Durham University, Durham, DH1 3LE, UK. [email: [t.h.moore@durham.ac.uk](mailto:t.h.moore@durham.ac.uk)]

Arno Braun is a research postgraduate and assistant researcher at the Institut für Vor- und Frühgeschichte, Johannes Gutenberg Universität Mainz. He works on a project focussed on the development and structure of the Late Iron Age oppidum at Otzenhausen, Saarland, Germany.

Address: Johannes-Gutenberg Universität Mainz, Institut für Vor- und Frühgeschichte. Schillerstraße 11, D - 55116 Mainz. [Email: [braunar@uni-mainz.de](mailto:braunar@uni-mainz.de)]

John Creighton is a Senior Lecturer in the Department of Archaeology, University of Reading. His research focuses on Later Iron Age and Early Roman Northwest Europe.

Address: Department of Archaeology, University of Reading, Reading, RG6 6AB, UK. [email: [j.d.creighton@reading.ac.uk](mailto:j.d.creighton@reading.ac.uk)]

Laura Cripps is Assistant Professor of Anthropology at Howard Community College. Her research focuses on Iron Age social systems, in particular the Iron Age in Cornwall.

Address: Department of Anthropology, Howard Community College, 10901 Little Patuxent Parkway, Columbia MD 21044, USA. [email: [lcripps@howardcc.edu](mailto:lcripps@howardcc.edu)]

Peter Haupt is a Lecturer at the Institut für Vor- und Frühgeschichte, Johannes Gutenberg Universität Mainz, Germany. His main interests are the development of the cultural landscape, mining archaeology, archaeological and geophysical prospection and religious behaviour.

Address: Johannes-Gutenberg Universität Mainz, Institut für Vor- und Frühgeschichte. Schillerstraße 11, D - 55116 Mainz, Germany. [Email: [hauptp@uni-mainz.de](mailto:hauptp@uni-mainz.de)]

Ines Klenner is a research associate in the Department of Pre- and Protohistory, Institute of Archaeology at Hamburg University. She studied at Leipzig and Mainz universities and has directed excavations at Rottweil and a settlement in Albania for the University of Cologne.

Address: Universität Hamburg, Archäologisches Institut, Edmund-Siemers-Allee 1, Flügel West, 20146 Hamburg, Germany. [email: [Ines.Klenner@uni-hamburg.de](mailto:Ines.Klenner@uni-hamburg.de)]

Pierre Nouvel is Maître de conférences in the Département d'histoire de l'art et d'Archéologie, Université de Franche-Comté. He specialises in the archaeology of Iron Age and Roman Gaul, his work focuses particularly on settlement patterns and landscape archaeology.

Address: Université de Franche-Comté, Besançon, France. [email: [pierre.nouvel@univ-fcomte.fr](mailto:pierre.nouvel@univ-fcomte.fr)]

Côme Ponroy is a research student in the Department of Archaeology, Durham University. His research focuses on Late La Tène settlement change in southern central France.

Address: Department of Archaeology, Durham University, South Rd., Durham DH1 3LE, UK. [email: [c.v.ponroy@durham.ac.uk](mailto:c.v.ponroy@durham.ac.uk)]

Martin Schönfelder is an archaeologist at the Römisch-Germanisches Zentralmuseum. He is editor of the *Archäologisches Korrespondenzblatt* journal and member of the committee of the *Association Française pour l'Étude de l'Âge du Fer*. His main research interests are late Iron Age elite, rituals and the expansion of the La Tène culture.

Address: Römisch-Germanisches Zentralmuseum, Forschungsinstitut für Archäologie. Ernst-Ludwig-Platz 2, D - 55116 Mainz, Germany. [Email: [schoenfelder@rgzm.de](mailto:schoenfelder@rgzm.de)]

### **Oppida, Großsiedlungen und Vorstädte. Das Umfeld von Bibracte und neue Ausblicke auf die Stadtplanung in der späten Eisenzeit im östlichen Zentralfrankreich**

Dieser Aufsatz untersucht den Charakter und die Datierung von latènezeitlichen und frühromischen offenen Siedlungen im östlichen Zentralfrankreich. Die Anregung dazu erfolgte durch die Entdeckung einer Latène D2b-zeitlichen bis augusteischen (ca. 50 v. Chr. – 15 n. Chr.) Anlage im Morvan bei Bibracte, die ca. 115 ha Fläche bedeckt und sich um die Quellen des Flusses Yonne erstreckt. Es wird vorgeschlagen, dass dieser Siedlungskomplex eine Ergänzung, aber auch einen Kontrast zu den üblichen Interpretationsmodellen von spätlatènezeitlichen und frühromischen, offenen Großsiedlungen und ihrer zeitlichen Entwicklung darstellt, und weiter zur Komplexität der Entwicklung spätlatènezeitlicher Oppida beiträgt. Es deutet sich an, dass einige der „Agglomerationen“ anderen Entwicklungslinien folgen, die wichtige Fragen zur Landschaftsgenese und zum sozialen Wandel am Ende der Eisenzeit aufwerfen.

*Stichworte:* La Tène, oppidum, Frankreich, Siedlungskomplex, Landschaftsarchäologie.

### **Oppida, agglomérations ouvertes et faubourgs (suburbia). Les environs de Bibracte et de nouvelles perspectives concernant le processus d'urbanisation du centre-est de la France à la fin de l'Âge du Fer.**

Cet article a pour but d'explorer la nature ainsi que la chronologie des agglomérations ouvertes apparaissant à La Tène Final et au début de la période gallo-romaine du Centre-Est de la France. Il fut inspiré et écrit suite à la découverte dans le Morvan d'un site de 115 ha datant de La Tène D2b et de la période Augustéenne (50 av. J.C. à 15 ap. J.C.) s'étirant autour des Sources de l'Yonne. Cette agglomération apporte de nouvelles perspectives sur la chronologie et sur le rôle des habitats ouverts à la fin de l'Âge du Fer ainsi qu'au début de l'époque gallo-romaine apportant des éléments amenés à renforcer le caractère complexe de l'histoire du développement des oppida à La Tène Final. Cette synthèse tend à démontrer que ces agglomérations suivaient des trajectoires chronologiques variées, élevant un certain nombre de questions, et donc des nouvelles problématiques, concernant la nature du paysage et du changement social à la fin de l'Âge du Fer.

*Mots clés:* La Tène, oppidum, France, agglomération, archéologie du paysage.

---